

# AMERICAN BEE JOURNAL

DEVOTED EXCLUSIVELY TO BEE CULTURE.

Vol. X.

CHICAGO, APRIL, 1874.

No. 4.

## Correspondence.

Correspondents should write only on one side of the sheet. Their best thoughts and practical ideas are always welcome; no matter how rough, we will cheerfully "fix them up."

### For the American Bee Journal. The Bee Disease.

The question, What caused the loss of so many bees, during the two or three last winters, seems to be attracting more attention, at the present time, than anything else connected with bee culture. And there is probably no other point upon which there is such a diversity of opinion, or upon the proper solution of which, so much depends. That there has been some general cause for the losses which bee-keepers have sustained throughout the Northern States, is too palpable to admit of successful contradiction; but that there has been any cause operating that cannot, with proper care, be remedied by the apiarian, I do not believe. Neither do I believe with some of our apiarians, that the loss was caused by an epidemic; nor with others, that it was the result of the bees eating from honey. I believe that it was caused, mainly, by cold, and disease engendered by the same.

That there was dysentery, I freely admit, for I saw the most convincing proofs of that, among some of my neighbor's bees that died, but in every case it was where bees were wintered on the summer stand, or placed in cold depositories—no better, if as good, as the summer stand. I will mention a few of the many cases that came under my observation last winter:

J. W. Hulet, living about one-half mile south, put his bees, consisting of eight swarms, in a cold shed, filled in with sawdust, four inches thick at the ends and one side, the other side being inch boards. He lost six of the eight swarms by dysentery.

Lewis Skeels, living a short distance south-west, wintered his bees on their summer stand, and lost all he had, by the same disease.

I put eighty-eight swarms in my bee-house, which is frost proof. Three of the eighty-eight swarms were made up of bees taken out of my nucleus hives, at the end of the queen-rearing season. One of the three was queenless, being put in the house as an experiment, and the other two had young queens that had not laid any eggs, so far as I knew, when put into the house. I lost these three, probably from old age of the bees, as those taken from the nucleus hives were nearly all reared during the summer months, and two of my regular swarms by starvation, and that with from fifteen to twenty pounds of honey in their hives, the bees having clustered at one side of the hive, their stores being at the other; and one swarm from some unknown cause. The rest came through in good order. There was little or no appearance of dysentery, the combs of those that died being clean and bright, except where the cluster of dead bees had slightly caused them to mould.

Now, if it was bad honey that killed my neighbor's bees, by giving them the dysentery, why did mine not have it? Their honey could differ but little from what mine had, since they were kept so close together.

Mr. E. L. Arnold, living five miles north, wintered his bees, consisting of twenty swarms, in his cellar, and did not lose any, while his neighbors lost from one-fourth to one-half of all they had.

Mr. J. K. Miller left his bees on their summer stands until some time in January, and up to that date lost seven out of thirty-eight, and a number of the rest were so weak, he thought they could not live until spring. He then put the rest of them in his cellar, and only lost one swarm after they were carried in, and in that he thinks the bees were nearly all dead before they were put into the cellar.

It has been asserted that bees carefully housed, had suffered about as much as those wintered on their summer stands. There may have been such cases, in some localities, but there has certainly been none in this section.

I fear that extracting the honey and feeding syrup, in order to prevent the dysentery, will kill more bees than it will save, owing

to the feeding not being attended to early enough to give the bees time to seal up their stores before cold weather. In most cases, perhaps, there will be no necessity for deferring the feeding until it is too late, but where it is desired to extract the honey that is gathered late in the fall, before feeding, I fear in a fall like that of 1873, where the cold sets in earlier than usual, some of our most careful bee-keepers will sometimes be caught before they are through with feeding. In cases of that kind, I should certainly prefer sealed honey to unsealed syrup.

Too frequent disturbance of bees, after they are housed, is often, I think, a prolific cause of loss. The injunction to "see them often" is right to the point, so long as they can fly out, but when they are housed, my advice would be to let them "severely alone."

We should see that they have plenty of stores, and that those stores are in the right place, before they are put into winter quarters. Also, that the room in which they are wintered, be dark and warm, and the temperature as even as possible. I notice the bees are the most quiet in my bee-house, when the thermometer stands at about forty degrees. If it went much below that, I should want it, as Mr. Quinby says, to go enough above to make that the average. With these things attended to, we shall have but little cause to fear the ravages of the bee disease. At least, according to my experience.

JAMES BOLIN.

West Lodi, O.

For the American Bee Journal.

### Do Bees Destroy Fruit?

The following letter by Mr. Kruschke and comments of Prof. Riley we publish from the *New York Tribune*, at the request of both parties. Barring the personal feeling, which is too common among controversialists, the articles will be found interesting.

Many complaints have been made that bees destroy fruit. Being a bee-keeper, I consider it also my duty to be a bee defender. Various theories are indulged in. Some assert that bees prevent the fruit from setting; others maintain that bees puncture the fruit when ripe. A correspondent of *The Tribune*, in the fore part of summer, complained that bees destroyed his peaches, and not knowing what to do, asked for advice through your columns, whereupon the learned and wise (?) Prof. Riley took it upon himself to give a recipe, with which to poison the bees, and he also stated that by such management he had known one-half of an apiary to give out. He would have benefitted man-

kind a great deal more, had he taken a dose of the mixture himself. Does Prof. Riley not know that his bee-destroying recipe has gone before the world, among people some of whom are still more ignorant than himself? Does it not trouble his conscience, to be the destroyer of the most admirable, busiest, and most profitable insect created? And all because some ignoramuses imagine the bees destroy their fruit without any facts for evidence.

In the *Report of Agriculture* for 1871, some state that bees had destroyed their grapes, which led me to take close observation. Accordingly, I took a bunch of Delaware grapes (the tenderest I could get) and put them on the hive, directly over the bees, and watched proceedings, but not a single berry was punctured; then I broke a few of the berries, upon which they immediately went to work and sucked them dry—thus showing that something beside bees must open the grapes, or any other fruit, before they can touch it. Perhaps it is in the growth, or in the weather, or the work of some other insect, but don't lay it to the innocent bee. How is it that we don't hear of such complaints in Germany, France, and Italy, where fruit, especially grapes, are raised so extensively, and bees kept in great numbers? If the bees were so destructive to fruit, would they not have enacted laws long ago, to prevent their being kept? Such is not the case; on the contrary, bee-keeping is encouraged. In Italy there is a law regulating the size of hives and frames.

If these prejudiced complainants would only investigate a little closer, they would see how ridiculous their condemnations appear to a close observer. Practical bee-keepers of America are unanimous in their answer to this question. They declare bees do not injure fruit of any kind. Many of them are extensively engaged in fruit culture, and they say bees help in impregnating blossoms, by bringing the pollen of the male and female blossoms in contact. Finally, I would say to those complainants, Procure and diligently read one or all the bee periodicals published in this country, and thoroughly post themselves on bee culture, and not depend entirely on their own investigations, which is not sufficient, for even Agassiz makes blunders in the bee line.—[*H. O. Kruschke*, Green Lake Co., Wis., in *N. Y. Tribune*, Dec. 31, '73.]

COMMENTS BY PROF. CHARLES. V. RILEY.

In the article which Mr. Kruschke attempts to criticise, I stated that I expected to have most bee-keepers down on me, and his protest is but one of several which, while they charge me with all sorts of ignorance and crime, only betray the ignorance of their authors, and utterly fail to disprove the facts

I have stated. All such protests that I have seen, so far, are marked by passion, bias, and personality, rather than dispassionate argument or presentation of facts.

Mr. K.'s isolated experiment is interesting, so far as it goes; but "one swallow don't make a summer," and one experiment cannot negative accumulated evidence. All the hubbub in the world, from prejudiced bee-keepers, cannot change facts that have been witnessed by hundreds of others, as well as myself. Bee-keepers may do their best to shear the fact of its importance, but all the most winning sophistry will not annihilate it. They may observe and cover it with the drift of adverse opinion, but, like the boulder, it will remain unchanged by the superincumbent deposit, and stand forth boldly, long after the evanescent and incoherent surroundings have been washed away by the stream of truth. I am as confident that bees at times cut the skin of tender fruit, as I am that they cut their comb or the caps of their cells; and as Mr. K. does not seem to have much confidence in the reliability of my own observations, I will say that he will not only find proof of the direct injury which bees do fruit in the reports of the Department of Agriculture, but in the reports of the different State Horticultural Societies, and in the columns of industrial journals.

To the last assertion made by Mr. K., I was myself a successful bee-keeper for over three years; and not one bee-keeper of large experience and reputation, has undertaken to controvert the facts I have stated. On the contrary, Mr. L. T. Waite, of St. Louis, Mo., and Mr. L. C. Francis, of Springfield, Ill., well-known as successful and intelligent apiarians, have both admitted the truth of what I wrote; and "Ella," the bee-correspondent of *The Chicago Tribune*, whom I know to have large experience, in a recent discussion of the question, says: "Whatever our opinions may be, they must at least yield to stubborn facts, and, in case such facts, are presented to a court of justice, there can be little doubt that the bees will be convicted." A whole volume might be filled with evidence in support of my position, from reliable observers; but, not to waste more time, let me say to Mr. K., as to another article in *The Rural New-Yorker* [in answer to another correspondent of the JOURNAL, viz: Chas. D. Hibbard, who also has something to say against "this sapient Prof. Riley"—C. V. R.], that "in advising extreme measures in an extreme case, I by no means make general war upon bees: for I have too long communed with these busy little insects, not to have an admiration for them as great, at least, as that professed by some of their more noisy champions.

"If, in exceptional seasons, when no flowers offer their coveted sweets, these bee-keepers who have large apiaries, with fruit-growers for neighbors, would properly feed their bees, said neighbor would have little cause to complain." Mr. L. B. Hogue, of Belmont Co., Ohio, in *The Tribune* of July 23d, last, suggests as a remedy for the difficulties which fruit-growers experience from the bees of negligent and careless neighbors, that, instead of fly poison or the planting of *Asclepias*, a few acres of catnip (*Nepeta*) be planted for bee-food—an excellent suggestion, providing it is made to the bee proprietor, and not to the fruit-grower; for the latter must not be expected to take care of the former's property.

#### REPLY BY MR. KRUSCHKE.

Since the above was in type we have received the following reply from Mr. Kruschke:

In reply to Prof. Riley, Mr. Editor, I would remark that he says that he expects bee-keepers will be down on him. Well, I would like to know how many horticulturists have thanked him.

Not only bee-keepers are down on him, but all peace and justice loving persons must criticise him, for any such course as he advises would bring enmity and discord among neighbors, even if bees were guilty of puncturing fruit. It would be no more just to kill bees than it would be to kill cattle if they break into another man's enclosure.

He compares my *isolated* experiment with "one swallow," etc.; but the Prof. has not even a single "swallow" to offer in his argument, and says one experiment cannot negative accumulated evidence. But I say a single demonstrated fact is worth more than volumes of theory to the contrary; and theory is all the evidence he has to offer. When Galileo, by the means of his telescope, demonstrated to the world that the earth moves around the sun, his single *isolated* experiment upset all the volumes of theory accumulated on that subject. When Columbus sailed westward, and found land beyond the waters, his demonstration negated all theory to the contrary.

So I, with a single experiment, overthrow all presumptive evidence to the contrary. For I have not, and do not presume Prof. has, heard of or seen a like experiment proving the contrary. He calls my experiment *isolated*. I would like to know on what the Prof. bases his *confidence* concerning the fruit-destroying propensities of bees? Seeing bees on fruit is not proof that they puncture it. The question to be answered is simply this: Has he seen bees in the act of cutting the skin of the fruit? If he cannot answer affirmatively, all his gushing about a bould-

er, truth, etc., amounts to nothing, for it may prove a volcano. It is not necessary for me to consult horticulturists, or horticultural works, for they can offer no positive evidence, and I shall accept no one's *ipse dixit*. The same is true of those bee-keepers he refers me to—they merely admit it as possible, but I can give him the names of ten bee-keepers who deny the charge, to his one who admits it, but I should consider neither evidence, unless they have tested it as I did.

The advice given by Mr. Hogue, of Ohio, in the New York *Tribune* cannot be praised too highly, while his (Riley's) cannot be too severely condemned. The former will give equally satisfactory results whether practiced by a horticulturist or a bee-keeper, for catnip will grow with as little trouble as milkweed. His experience and experiments with bees must have been with a view of destroying them, since he knows so well how to do so; but he says he *loves* them and does not make *open war* upon them. Well, no; it cannot be called warfare, but a *cowardly assassination*, criminal in its nature.

I shall continue my observations every fall, and at times when there is little or no bee forage, and if I find that bees cut the skin of grapes I shall acknowledge it. But shall not then indorse bee-destroying recipes and catnip culture. More might be said, but this is already too long.

H. O. KRUSCHKE.

For the American Bee Journal.

### A Cheap and Good Feeder.

It is an infringement on Novice's. We use a good many of the ordinary self-sealing tin fruit cans, and each year my wife discards some that have been used and become a little rusty. Then with a punch of any kind, or an ordinary jack-knife, I make a number of holes in the lid or cover of the can, fill the can with honey or syrup, put on the cover, invert, and place over a hole in the honey board. The honey will not run out only as the bees eat it out. As these cans are thrown away, the only cost is punching the holes in the cover. These cans hold three or four pounds of honey, and cost, when new, from six to twelve cents. Mr. Grimm told me his improved Novice-feeder cost twenty-five cents each. If the price were the same, I think I would prefer his.

ANOTHER.

When feeding a very small quantity for stimulating purposes, when the weather is warm enough for the bees to remain at or near the entrance, I use ordinary sauce dishes. Put in two or three table spoonfuls of diluted honey, set the dish at the entrance, and if the bees do not immediately attack it, tap on the hive. Of course it will

not be long till the dish is filled with drowned bees, but in a little while bees and dish will be cleaned off perfectly dry, the bees none the worse for their sweet bath.

C. C. MILLER.

Marengo, Ills.

### Index to Back Volumes.

As a matter of reference I have always kept an index of back volumes at the front page of my latest volume of the AMERICAN BEE JOURNAL, so that by reference to it, I might find any important item in any of the various volumes. I find it almost indispensable in my search. I send you a portion of the items found in the letters H and I.

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Repeated observations show that the secretion of honey is powerfully influenced by the electricity of the atmosphere: and bees never labor more actively than during humid, sultry weather, or when a thunder storm is approaching.



For the American Bee Journal.  
**The Bee Disease in Western New York.**

As my experience with the bee disease (so called by many good apiarians) has been of a character not to make its repetition desirable, I propose to give a few facts connected therewith, hoping that some of your correspondents will correct me if I have arrived at a wrong conclusion.

Our apiary is located on the western slope of the Genesee, about seven miles west of the river, in a line not far from one mile north of west from the village of Geneseo. Although during cold nights the mercury in the thermometer sinks several degrees lower on the flats than on the uplands, yet, owing to protection of these flats from winds, in the middle of clear, calm days, the temperature at times was of sufficient warmth to admit of bees flying, whereas at the distance above mentioned they had no opportunity to leave their hives from late in the fall till the latter part of winter, consequently when the opportunity did come what had not been frozen out were in an emaciated condition and hardly able to regain the hive after once leaving it.

Thus reduced in numbers, they were unable to recruit, and consequently, they gradually dwindled away, leaving the hive well stored with pollen, comb and honey. Out of an apiary of over sixty colonies in the spring of 1873 we had but one swarm left.

Our neighbors fared no better, for throughout the length and breadth of this elevation of country—bordering both sides of the valley—from Ontario to Pennsylvania, (a part of the fairest and most fertile section of Western New York,) the same scene of disaster and desolation to a greater or less extent prevailed, and bee-keeping received a blow from the effects of which it will require some years to recover. Piles of empty hives stood where was once flourishing apiaries, and the busy hum of millions of industrious workers was hushed, and silence reigned supreme.

From the facts above stated I am led to believe that the great loss of bees throughout the country was by protracted cold weather without any favorable opportunities for purifying flights. In the valley proper, the loss was not above the usual average as they had several chances to fly, and consequently came through strong and healthy, but as you traveled east or west from the river, the elevation gradually increasing, the greater would become the loss, till you arrived at what might be termed the dead line.

Another circumstance which serves to confirm me in the opinion that there was no epidemic, is that I took some bees with frames of comb left by bees which had died from the disease the winter before, to a person in

Avon, who hived into them new swarms, which came out in the spring in fine condition, strong, healthy, and without any sign of disease. I again have all my hives and combs refilled with bees and never had them do better than they have done the past season.

I will close by saying that if re-using hives and combs from which bees died out the season before, will not spread and propagate disease could there have been any epidemic connected therewith? When with due care we can count on wintering our bees with as small a percentage of loss as on other live stock, then will bee-keeping be established upon a surer basis, whereas, of late hundreds of dollars have been invested in the business, from which there has not been received any adequate returns.

C. R. ISHAM.

Peoria, Wyoming Co., N. Y.

**Berlepsch on the Culture of Rape.**

In order to make the introduction and culture of rape successful I have gathered testimonials in regard to its value as a farm crop, and honey plant, from the rape growers in Wisconsin. I have also written to Mr. Berlepsch, and received the reply which is given below. Since it is the most important report, and testimonial from such high authority concerning a honey plant, ever given in the AMERICAN BEE JOURNAL. I thought it of sufficient interest to publish. It will surely be found interesting, and will encourage the culture of rape, which, I am quite certain, can be made a success, here in America, as in Germany.

Berlin, Wis.

H. O. KRUSCHKE.

Munich, Bavaria, Feb. 8th, 1874.

DEAR BEE FRIEND:—Your appreciated letter of Jan. 19th, is at hand. . . . . In reply to your question, I would say, that I can answer you with certainty.

During the years—between 1841 and 1858—that I was a practical agriculturist, I cultivated rape (see pamphlet) to a large extent, and can, in consequence thereof, and from knowledge otherwise gained, testify most assuredly, that in all Germany there is no plant yielding more honey than rape. I know of instances, occurring in my own experience, where a very populous colony of bees, during the time rape was in blossom, gained a weight of twenty pounds and over in one day.

On the tenth of May 1846 there was near me a sixty-five acre field in blossom. The weather was excellent, and my strongest colony, which I placed on a platform scale, gained that day over twenty-one pounds in weight. I know only of one other plant that can be compared with rape as a honey-yielding plant, and that is esparcet. It is probably the best fodder-yielding plant for cattle and sheep. It flourishes on the poorest soil, if only not wet, and from ten

to fifteen years without re-sowing, and yields enormous quantities of fodder.

Concerning the value of rape as a farm crop, I can say it is very great, often yielding a net income of \$32 per acre. The soil however must be rich and well tilled.

AUGUST, BARON VON BERLEPSCH.

For the American Bee Journal.  
**California for Bees.**

MR. EDITOR.—I see in the February number of the JOURNAL an inquiry if this part of the world is good for bees, and in answer would say that I believe it is the best in the world, both as to quality of honey, quantity and healthiness of bees. In support of my assertion will give my reasons for making them.

In the winter of 1871-2 I bought eight stands of bees in box hives, transferred them into the American hive, and in May I divided each hive, making sixteen. I put them on a little place I put up at the foot of the mountain, as I was then suffering from a cough, caused from a wound received through the lung at the battle of Shiloh. I thought I would rusticate a few years, if I lived; but when the warm weather came on I felt so much better, I left the bees and ranch and went to town, leaving my bees in charge of a neighbor who lived a half mile away, I instructed him to put on extra boxes, and did not return until the last of July, when I found them all full. I took out all the honey I could, without disturbing brood nests, and fitted up a lot of extra boxes, and melted out the honey in the sun, as I then had no extractor, and left my bees again in the care of the neighbor, and did not return till the last of November, when I found all full again, and I went through the same process of pruning, and took the honey to market, and found I had 3,500 lbs. of good white honey, which I sold for 12 and 13 cents per lb.

I remained on the ranch that winter; and in the spring transferred all my bees to the Langstroth hive, and divided, so that I commenced the season with thirty-four swarms, and increased to fifty, and by using an extractor and remaining with the bees through the summer and giving them the attention I could, which was but very little on account of ill health, I got 7,000 lbs. of extracted honey of a very superior quality. I got from one swarm that came out in May, 402 lbs. of honey in comb, and left it in fall with twenty-two frames full of honey and brood.

I would like to make arrangements with some firm in the East to ship my honey to in the barrel, and have them bottle it and put it on the market for me. I am satisfied that the poorest honey we have will compare with your best basswood. Honey was very dull sale here last year. J. W. MONTGOMERY.

San Bernardino, Cal.

For the American Bee Journal.  
**Feeding Bees.**

While I thank Mr. Marvin very much for his proffered instruction, allow me to say that our kind reporter made a mistake in reporting me to have said, "is there a remedy" for irritating bees, while shaking them from deep combs. I have no deep combs, and never expect to have. I would much rather use the Bingham depth of five inches, than fourteen.

I have all pure Italian bees (thirty-three colonies), and having no blacks to contend with, had thought of propagating queens for the market, but now am determined to purchase twenty or forty colonies of black bees for next season's operations, and practically test the superiority of the Italians (if they have any) over the blacks,—all things considered. Shall allow no increase from either; shall keep all in the same yard; give all equal chances.

I hold (with Mr. Dadant) that sugar is not honey, until it goes into the honey sack and becomes acidized. Hence bees should not be wintered on sugar poured into the combs, but on sugar *honey* made by feeding in the fall. My experience leads me to say, that all kinds of out-door wintering is good, that will give the bees plenty of oxygenized air of a temperature not lower than thirty-five degrees Fahrenheit. Have not heard of any such, however.

If Mrs. Harrison will take a two-quart fruit jar, and punch about seventy-five holes the size of a pin, through the cover, and then after filling the jar, screw on the cover, and insert through a hole in the honey-board, or cover, she will have a twenty-five cent feeder that will feed as little as she pleases, and will feed in autumn, enough for wintering in seventy-two hours, or three such on a hive, will feed the same in twenty-four hours. You can see at all times, just how business progresses. Have used the Grimm feeder with perforated tin, instead of wire, screen. For spring feeding, punch only ten holes. I have only inch holes in my covers, so I make a hole just the size of the jar top, through a board 6x6x1, and place this over the inch hole and insert the jar, which will not blow over, and leave a half inch space between the hive cover, and perforated jar cover. The same may be put over a slot in the honey-board. I used twenty-four such, to feed winter stores to sixteen colonies, the past fall. I believe (after much experience) that making hives double wall, is throwing away money. They are not as durable as single wall hives, and in no way any better. Have tried hundreds of each, side by side, and the above is *our* experience.

Dowagiac, Mich.

JAMES HEDDON.

For the American Bee Journal.

### Letter from Kansas.

#### THE PROPER MAN.

A few days ago I received a letter from Mr. A. Chapman, of New Cumberland, West Virginia. He speaks of a man that met me with a lot of queens on my way home from Kelly's island. Then he asks me "who the proper man is to write to, to get queens from there, and whether I think the queens raised there are pure." He then goes on to say that "he thought Mr. — the proper man, and ordered a lot of queens of him, which, however, he regarded as impure, and he feels very much aggrieved." All of which questions we are unable to answer, because we are not the "proper man," and have never been to Kelly's island, nor received any queens from there. If the man that obtained a lot of queens at the Island, will answer Mr. Chapman's questions, no doubt he will take it as a favor. We find no fault with queen breeders that live up to their contracts, but when they advertise that they warrant the queen to be pure, and when they do not prove to be such, will furnish other queens, or refund the money, we naturally understand from such a contract, that we are buying queens that have not been tested, and take the chances.

If every one in a dozen should prove to be hybrids, we have no business to complain, if the money is refunded, or other queens sent, as we may elect. But would we not naturally come to the conclusion that if a large majority of the queens sent out by any breeders, were impure, that he was not the proper man? In buying that kind of queens, we are well satisfied if three-fourths or more of them are pure. But in ordering *tested* queens, it is a different thing. The breeder in that case cannot make you good by either refunding the money or furnishing you another queen. If the queen should prove to be impure, you have sustained a damage equal to the value of the queen, or more, besides having your money refunded.

#### THE MELIPULT.

I was sorry to see the opinion of Mr. Adair, thus: that the "extractor has been overrated. If bee-keeping is to be made a success, it will not be accomplished with the use of the Honey Emptying Machine." This decision, however, is logical, from the standpoint of the *melipult*. Will not somebody furnish the General with a good, common Honey Extractor, without so many scientific principles about it, as the "melipult?" That machine, we believe, would be a success in scattering hayseed among politicians.

#### WINTERING BEES.

What is the cause of the dysentery? Now who would not like to know that; and how

to winter bees without loss? The causes are laid down positively by Mrs. Tupper. "Too much honey; too many old bees; too much cold; too much disturbance." Mr. Quinby agrees with her, as far as the cold is concerned. And Mr. Root, with his sugar syrup, without *acid*, has the panacea. But what seems the strangest of all, is, that beekeepers won't believe it. There is no one that has faith in another's theory, and it is a mooted question whether success in each case depends solely on *faith* or merit in the prescription. Now, if it was the cold, the disturbance, the old bees, too much honey, or bad honey, why was it that my bees all wintered safely too years ago? All old bees—some full of honey, some nearly empty—swarms of all sizes, and disturbed every few days? But last winter, with my bees in the same cellar, treated the same way, only not disturbed as much, two-thirds of them or more had the dysentery, and last fall they were breeding a month later than the year before! Hives of all conditions were among the eighty that were put in last year, and those that escaped the dysentery, were some of the very smallest swarms. Some of the best and heaviest, and some medium, including four or five hives that were supplied with sugar syrup without acid, was among the first to die. As Mrs. Tupper says, they "miserably perished" every one. I might say here, that I was not testing the sugar syrup, because I had faith in it; but, from the fact that I had orders for more honey than I had a surplus to fill, extracted several hives clean, to get enough to fill the last order, so that a want of faith could not have been the cause of my failure.

#### RAISING BROOD WITHOUT POLLEN.

I take the negative side of that question. I tested it last season, by confining a queen on a frame, with young bees that had never had access to pollen, and they could proceed no farther than merely hatch the eggs. But a swarm of bees that had been feeding young, might have prepared food enough in their stomachs to raise a large number of bees, if confined to a hive that has no pollen in it. If pollen is not necessary, what fools the bees are for collecting it.

#### RECIPE FOR FOUL BROOD.

We noticed in the JOURNAL for November, a sure cure for foul brood, which being a compound of some nine different ingredients, we think would either kill or cure; but it looked to us as though there must be some mistake. Three of the ingredients amounted to eighteen pounds, which, with the rest, were to be pulverized and put in a flask, with a quart of brand, but it would take a pretty large flask—at least one that would hold four gallons, and then a quart of brandy would not moisten the compound; in fact, we think it would

not more than lay the dust on the top. We look for more light on that perscription.

#### THE DYSENTERY.

We are satisfied that this is a disease that no one yet knows how to cure or prevent. We find at this writing (Dec. 16) that the dysentery has commenced among our bees. There has been no very bad weather yet—the coldest day was not more than ten or twelve degrees below the freezing point. We now have our plans in readiness, and we will, this winter, test two entirely new methods of wintering, and if either of them prove a success, it will be known in due time.

N. CAMERON.

Lawrence, Kansas.

For the American Bee Journal.

### Our Queenless Colony.

All wise apiarians agree, we believe, in recommending that a colony queenless at the approach of winter, be united with another colony—the weakest you may have.

But if your other colonies are all strong, are quietly clustered, and in all respects have been cared for as well as your knowledge and situation will admit, do you improve their chances for successful wintering by disturbing their slumbers and unnecessarily augmenting their number?

This question we found ourselves called to consider, when, on the first of November, the murder of their new queen had left No. 7 in a hopelessly disorganized state. The weather was cold. Our well-regulated colonies were sound asleep. It would require at least three of these to provide room for our rebels. Should we disturb them? And should we trust their queens—beautiful Esther, dusky and capricious, but sprightly and interesting Cleopatra, and our well-beloved Eve—in the presence of these regicides? We decided that we would not.

Another course of procedure was to shake the bees from their combs, upon the snow, thereby saving some thirty pounds of honey. I cannot say this plan received much consideration. As what might be done by a stern old veteran bee-keeper, it was alluded to, and its comparative profitableness admitted. But our organ of destructiveness is too small for such heroic action, and not for one moment did we fancy ourselves capable of it.

On the discovery of our second loss we had dispatched a somewhat frantic appeal to Mr. — for another queen; but this was done as a drowning man catches at straws—quite hopelessly.

So, at last, we found but one course left to us—to take as good care of the colony as possible and wait for spring. We were the better satisfied with this decision, that a suggestion to the same effect accompanied Mr. —'s

reply to our request for another queen. To this was kindly added the promise of advice as to management in the spring. Thus encouraged, we began to regard No. 7 in the light of a new study, and, if the whole truth be told, with more of interest than either, or all, of our six more hopeful and praiseworthy colonies could elicit.

During November, which with us was extremely cold, the queenless colony were in a constant state of agitation. How to keep them dry, and sufficiently cool—for when the mercury went down to the neighborhood of zero, they were reasonably quiet—was a constant study. The entrance was shaded, but seldom was there a day so cold that a few bees did not find their way out, to perish in the snow, while in moderate weather the number thus lost was somewhat appalling. Whenever, after severe cold, the weather moderated, they impressed us as having rediscovered their queenless state.

About the first of December we discovered at the entrance a number of immature bees. On examination these proved to be tiny drones—a little thicker, and a trifle shorter than workers. The first warm, sunny day thereafter, Dec. 4, we eagerly improved the opportunity afforded for a peep inside. On the central combs we found hundreds of the dwarf drones, for the most part rather young and downy, but evidently in good health, and very much at home. Of course they had been reared in worker cells; and we puzzled ourselves with conjectures as to whether the bees knew what they were about. Were they quite satisfied with the questionable shape in which their carefully nurtured brood had emerged? And could we hope that the experiment had taught them anything, or must we look for a continuation of this profitless brood rearing? We saw at this time no larvae, nor did we notice any eggs. There was one large, clumsy, half completed queen cell. We made a careful search for a young queen, (albeit we could not understand how there could be one,) and finally concluded that our little drones must be the progeny of a worker. From this time until Dec. 16, there was little change. As before, the bees were noisy and restless; as before they came forth daily to perish on the snow. Had not the colony been of unusual strength in the beginning, we fear that our experiment, in this way, would have come to an untimely end.

Dec. 16 was warm; and again we opened the hive. We were gratified to learn that no more little drones were being reared. There were, however, plenty of eggs—some cells containing a dozen. Many of these seemed shriveled, the same cell often containing two or three fresh ones. Opening another hive, I was fortunate enough to find some nice looking eggs, properly arranged. Cutting out a piece of comb containing about fifty



eggs, I inserted it in a comb belonging to the queenless colony. Would they recognize the superior value of these eggs, and properly care for them? I was curious as to this, but had nothing further in view. Three days later these bees had become as quiet as those of our other colonies. The mortality occasioned by their leaving the hive suddenly ceased, for they suddenly ceased to come forth. We marvelled greatly, and were happy enough when on Jan. 3 we were able once more to investigate.

On examining the piece of comb inserted Dec. 16, we found to our chagrin—nothing. Greatly disappointed for the moment, we proceeded to lift the next comb. Here we found a little capped drone brood, in drone comb. Near the center of this was suspended a long, slender, capped queen cell! The bees seemed to be deeply interested in it, and clustered about it so thickly that it was with some difficulty that we assured ourselves that the cap had a brownish and soon-to-be-lifted appearance.

"Have you your penknife, Nellie?" I eagerly demanded.

Nellie answered my query by coolly taking the frame from my fingers and carefully dropping it into its place.

"I think we will leave her to introduce herself," she said gravely. "These bees are so very peculiar and punctilious,—they might object to taking her from the point of a knife!"

"But," I remonstrated, "the cell may contain only a dead or dying drone; I should have found out."

"You don't think so, neither do I, neither do the bees, evidently; and you don't want to risk bringing about a relapse from the quiet of the past two weeks, to the old discontent and restlessness—you know you don't."

Nellie sometimes forgets she is my junior, but, in consideration of her ordinary docility, I usually yield to her upon such occasions, and console myself for the temporary abnegation of authority by holding the reins a little tighter when I recover them.

In the present case I only remarked mildly, "Well, admitting that a worker egg was carried across from the piece of inserted comb, and successfully deposited in the queen cell, what has become of the remaining forty-nine (more or less) worker eggs?"

"Oh," said Nellie, "they only succeeded with the fiftieth egg; the remaining forty-nine didn't bear transportation."

"An explanation more convenient than probable, I suspect."

"Well," said Nellie, "I *can* suggest another—shall I?"

"Certainly; why not?"

"Because it is rather shocking. Perhaps the eggs *were* hatched. Somewhere, I have

seen a suggestion, or an assertion, to the effect that for the compassion of royal jelly, young larvae—"

"That will do, my dear; I remember! I very much prefer your first explanation."

We closed the hive with the mental agreement that it would be well to search for our hypothetical queen on the next warm day.

Such a day—a day both warm and still—came not until Feb. 28. But with it, alas! came company; guests whom, on ordinary occasions, we delighted to honor. As it was—well, we womanfully choked down our bitter regret that our friends had not chosen washing day, or any other day but this—met them smilingly, and entertained them as best we could, while the warm, sunny hours of the afternoon—hours that for weeks we had sighed for—passed by, and our opportunity was gone!

We console ourselves only by reflecting that spring is at hand, and the colony is still alive. That it is much reduced in numbers, we must admit; but, we, nevertheless, regard it hopefully. The bees that we see at the entrance are, now, as bright, as small, and as active as their more favored neighbors. In any event, we shall not change our present opinion—that for truly *enjoyable* winter bee keeping, a queenless colony is indispensable!

CYULA LINSWICK.

For the American Bee Journal.

### Clipping Queens' Wings;

SIZE OF HIVES; "NEW IDEA" HIVES; AND OTHER THINGS.

At the late meeting of the North American Bee-Keepers' Society I read a paper on the Wings of Bees, showing that they must be important organs aside from their mechanical use as organs of flight; in fact that they are a *part* of the pulmonary system, and that any injury to the wings must affect the strength and value of the queens. Mr. Root, in his "Gleanings," without publishing the paper at all, says I say that "bees breathe through their wings," leaving it to be understood that I state that they compose the entire lungs, when any one who will read the paper will see that I take no such position.

I wrote to Mr. R. an explanation of his error and suggested to him that it would be fairer for him to publish the paper so that the readers might judge for themselves. He publishes a part of my letter, only. He still refuses to publish the paper, for which he gives the following reason in his February number. He says:

"We declined publishing the paper then, and do now, on the ground that *very few people indeed are capable of deciding what is truth and what is error in the microscopic world,*" and he goes so far as to take to task

the *Rural New Yorker* and other papers, for publishing it, because, as he states it, "mankind are so prone to take up and disseminate error," etc. Now it seems to me that Mr. R. is assuming a censorship over the press that is not called for, and is assuming a dogmatic position that he would condemn in others. It has been but a few months since in criticizing me and the "whole popular science world," as he called it, he very learnedly quoted a Latin maxim, "*magna est veritas et prevalebit*," which might be paraphrased, and if not more original, be equally truthful, "*magna est vanitas et prevalet*," for self-sufficiency must prevail to an alarming extent with any one who pronounces "very few people capable of deciding what is truth," etc., and believes that "mankind are so prone to take up and disseminate error," etc., and relies on his own infallibility as one of the "few capable" of dictating what people should read.

Are the "people" who read the bee journals and the rural press in need of such censorship? I had come to the conclusion that beekeepers as a class had more than an average of intelligence, even in a country like ours, where the government is based on the intelligence of the people as a whole, and where the freedom of the press is based on the theory that falsehood and error can do no harm where free speech and an unshackled press have full license to combat them, for as Mr. R. says, "Truth is mighty and will prevail."

Mr. Root makes a quotation from "Carpenter on the Microscope" confirming the description I give of the wings, except he says, "This circulation [he is speaking of the blood and not of the nervous or pulmonic system of the wings], may be seen readily in the wings of bees young and growing, . . . those organs especially which are peculiar to the perfect insect being then in a state of rapid growth and having then a vigorous circulation of blood through them; but this movement soon ceases and the wings dry up."

The last italics are Mr. Root's. I might reply to this in the language of Mr. Root by calling it "sheer folly" or "twaddle" or some of the hard names he so freely applies to all that differ with him, but I cannot believe that Carpenter is a fool, (I believe folly is defined to be "the acts of a fool,") or that it is "idle silly talk," which a "tattler" is guilty of, for he would likely be surprised at the use that Mr. Root made of his language, so contrary to the observations of every other eminent naturalist.

In the larva state the bee is composed of thirteen segments, eleven of these have each two spiracles or breathing holes, one on each side of the body. As it approaches the pupa state these spiracles are gradually obliterated and grow up, so that all of those on the segments that finally form the abdomen disap-

pear, and those on the thorax are alone left. As the bee approaches the pupa state there appear on the thorax over four of the anterior spiracles little pad-like projections which are the wings doubled up in wads, which may be seen through the pellicle that envelopes the pupa at that time. This skin sloughs off in the semi-pupa stage and releases the wads, and it is at this time that Carpenter says that the "circulation may be readily seen," as then the wings are but a pulpy mass and so translucent that there is no difficulty in observing the circulating fluid, for the circulation is "then vigorous" to promote their development and "rapid growth." "But this movement soon ceases and the wings dry up." Of course they do, for the limp, pulpy mass assumes a different consistency and develops the complicated elements of the wings, and there is no longer any necessity for an excess of moisture in the wings. The circulation is thence *hid* from sight inside of the horny tubes and under the covering of minute hair-like *papillae* that cover the wings. And this is all that Carpenter means to say.

One other statement of Mr. Root deserves a little notice. He says:

"So far as eminent naturalists and entomologists are concerned, we have only to say it will be the worse for them, if they endorse the paper in question, and its winding up especially."

Now as friend R. is the only naturalist among the many who have read the paper who does not endorse it, the "whole popular science world" must be in a bad fix. I can't tell how he intends to punish them, but I suppose he will publish them in the "Humbug and Swindle" department of his *Gleanings*. Would not it be a sad spectacle? But what is the winding up of this paper that he condemns as "specially" outrageous? The last paragraph is the statement of a fact that has been settled among naturalists for a long time: i. e. that the bee inflates its body with air when about to fly, so as to decrease its specific gravity, and assist it in flying. This is not only applied to insects, but ornithologists state that birds do the same thing, even filling the hollow barrels of their feathers and quills with heated air or gas. In this fact lies a very strong reason why the wings of insects should perform the office of lungs, for when the body is inflated there are valves at the openings of the spiracles that close and retain the air, just as in holding the breath, so at the very time that free respiration is most needed, it is impeded most, unless the wings perform the office of pulmonary organs; for the blood always flows more actively to the members of the animal body that are most in exercise.

The great difficulty with Mr. R., and all of the unscientific, is that they overlook the fact that nature accomplishes the same end by very opposite and diverse means. Because

man and the higher animals have certain parts of their structure specialized as lungs, they infer that every thing that breathes must have like organs, and that the functions cannot be exercised by any other. The special breathing apparatus of worms consists of simple filaments placed on the head, and they do not take air into the body at all, and in addition to these filaments, the whole surface of the body serves as lungs, so that if a worm be cut in two both parts will live, and become independent animals.

St. George Mivarts, in *Nature* for December, 1873, p. 108, says our skin is by no means popularly credited with the great importance really due it. "Only the skin!" is an exclamation not unfrequently heard, and wonder is very often felt when death supervenes after a burn which has injured but a comparatively small surface of the body. *Yet our skin is really one of our most important organs, and is able to supplement, and to a very slight extent to replace, the respective actions of the kidneys, the liver, and the lungs.* (See *Huxley's Elementary Physiology*, Lesson V., §19.)

The same authority tells us that, "In the frog we have this cutaneous activity developed in a much higher degree. . . . Its *respiratory* action is both constant and important. This has been experimentally demonstrated by the detection of the carbonic acid given out in water, over the head of which a bladder had been so tightly tied as to prevent the possibility of the escape of any exhalation from the lungs. The fact of cutaneous respiration has also been proven by the experiment of confining frogs in cages under water for more than two months and a half, and by the cutting out of the lungs, the creature continuing to live for forty days. Indeed, it is now certain that the skin is so important an agent in the frog's breathing that the lungs do not suffice for the maintenance of life without its aid."

The only argument that Mr. Root uses against the theory is, that practical experience disproves it, and he gives instances where queens have been prolific afterwards and lived a long time. Mr. I. L. Davis, of Michigan, appears in your February number with an instance of the same sort. But I can not admit that the instances cited by either have any weight, from the fact that the hives in which the bees were kept required no great vigor in the queens to keep up the population and to swarm, and the fact that such queens lived from three to six years proves nothing, for it is not contended that it will take their lives. My experience is that queens with mutilated wings most generally live longer than those with perfect wings, just as you see many unhealthy men that exert themselves but little, outlive the more robust and vigorous, not so careful of their vital force.

It is now conclusively demonstrated that the conditions under which we have been keeping our bees have restricted the queens, and that in properly constructed hives, with management adapted to their nature and instincts, the fecundity of the queen is incredible. Some two years ago I published a small book drawing the attention of apiarians to what has become known as the "New Idea Theory." It has been much ridiculed by Mr. Root and others, but that has not prevented its successful use all over the country. I will not go into the details of the theory here, as this article is already of a tedious length. At the late meeting of the North American Bee-Keepers' Society, when the subject of artificial swarming was under consideration, I gave a statement of the main points of it. In the synopsis of the proceedings as published, it is too much abbreviated to give a fair understanding of it. I therefore send you an extract from the full report, giving the whole of it, and as it will answer many questions continually asked me, and at the same time show Mr. Root and Mr. Davis, why I do not consider their reported instances as tests of the wing theory, request you to publish it in full. If you have not room for it in the same number with this, give it in your next, if you please.

D. L. ADAIR.

Hawesville, Ky.

### For the American Bee Journal. **Murdering Bees.**

Under this heading the February number of the AMERICAN BEE JOURNAL copies an article from the *British Bee Journal*, in which an English bee-keeper relates that the bees of one of his straw hives destroyed each other, and says that the murdered bees are of a smaller size. The editor of the *British Bee Journal*, in answer says, that he has experienced the same with his bees and that he thinks it is on account of their small size that these bees are murdered.

I have seen sometimes a similar accident in my apiary, several years ago; and I searched for the real cause. Having movable combs, I have not been long in ascertaining it. The bees killed were very young, and the murderers were the oldest. These old bees were not killing their sisters to rid the hive of them, but the young were starved by the famished gatherers, which could find nothing in the fields and nothing in the hive to appease their hunger.

I have ascertained that the newly hatched bees consume more honey in the first fortnight of their life, than they have consumed from the egg to their last transformation. The newly born bee is very small; after two days it is very big, even bigger than the old

workers, and for fifteen days it eats plenty of honey and bee-bread, to perfect and harden its organs. During that time it remains in the hive and nurses the larvæ.

When the crop of honey fails, and when there is nothing to eat in the hive, the old bees seem irritated to see these young bees so fat, so well filled with the product of their work, and they force them to give back the honey that they have in their stomachs. The poor young bees are pinched and tortured until their stomachs are empty. Then they run into every corner of the hive to escape from their tormentors, which, still famished, do not leave them till they are starved to death. Then the poor young bees, which were so fat, in well provisioned hive, have their abdomens shortened and curved inside. When they are in such a state, it is impossible to restore them to health. I have tried it in vain. When I have encountered similar accidents, I had seen the provisions of the colony several days before, and it seemed that they were sufficient for the brood; but the brood after hatching, ate so much that the bees were starving, and the young were sucked dry by the old. For five or six years I have never seen such a case; for I take the greatest care to see that my bees have enough honey for their young.

In the case alluded to, the correspondent of the *British Bee Journal* says, that the massacre took place at intervals of one week or ten days, especially on Sunday. Some ultra Christian will probably think that these bees were killed because they had worked on the holy day. But the naturalist will, no doubt, think with me that the massacre happened on the day when nothing was found in the fields by the bees; and as our mother nature does not know the seventh day, the lack of honey in the flowers must come from some natural and not miraculous cause.

When a similar accident arrives, the surest and quickest way to stop the massacre, is to give the colony one or two good combs of honey. No doubt a few of the bees, too much famished, will perish; but the murdering will be stopped instantly, and the colony saved.

CH. DADANT.

Hamilton, Ill.

**DESTROYING MILLERS.**—Mr. Philipson, an extensive bee-keeper of Genesee county, Michigan, says: "In the evening, place a shallow dish filled with thin tar in front of the hives, with a small lamp so placed in the center of the dish as to bring the light near the tar. The millers being attracted by the light dive for it and go into the tar. In a short time all the millers in the vicinity of the apiary will be caught."

### Artificial and Non-Swarming. The "New Idea" Theory and One Story Hives.

AN EXTRACT FROM THE UNPUBLISHED TRANSACTIONS OF THE NORTH AMERICAN BEE-KEEPERS' SOCIETY, AT LOUISVILLE, DECEMBER, 1873.

The question under consideration was, "Is artificial swarming as good or better than natural swarming?" D. L. Adair.—Moved that the Society answer in the affirmative.

Winder.—Why? We should give some reason for such an answer.

Adair.—Because natural swarming is always the result of disorganization, and a colony of bees in a properly constructed hive, properly managed will not swarm, while it admits of extensive multiplication of stocks, by artificial means, without materially injuring the old colony; and as long as such a hive is so managed no drones will be produced, and all the comb built will be worker comb, and no attempt will be made to build queen cells.

A. J. Murray of Tennessee.—Did not think that giving the bees room would prevent swarming. While in the Confederate army he assisted in cutting a bee tree in which he found two colonies in one hollow, the only division between them was the direction of the comb; and in another cavity in the same tree there was a new swarm that had taken up its quarters, which he supposed had swarmed from one of the others; yet there was plenty of unoccupied room in the large hollow.

Adair.—Still the queen may have been crowded for room.

Murray.—Knew of another colony that passed through a ventilator tube in a house, into a large room, where they located themselves and they swarmed. They certainly were not crowded.

Adair.—The extent of room, however great, will not prevent swarming, unless other conditions are present. It is the circumscribing of the brood nest that produces disorganization, and whenever the queen produces more eggs than she has room in the brood nest to deposit the proper balance of the hive is destroy-



ed, and it will result in the disorganization that produces swarming. In the spring, when the queen is laying but little, the brood nest is small. The queen begins at a given point to lay; first occupying a spot of about one and one-half inches in diameter on each side of one sheet of comb; then taking into her circuit a point opposite on each side of the two adjoining sheets. Around this centre she continues to lay, gradually enlarging the nest for twenty-one days. At the end of that time the young bees produced from the first eggs laid begin to emerge from the cells and she returns to the centre to begin her circuit anew, filling each cell as it is vacated. Around this brood nest the bees fill the cells with bee-bread and outside of that honey. (Bees never deposit bee-bread away from the neighborhood of brood.) Thus a brood nest is formed and if nothing obstructs it, will extend equally on all sides of the point at which the queen began to lay, and as the cells around it are filled with food, when she again reaches the circumference she finds her limits restricted. By this time, honey is coming in freely and she is stimulated to produce more eggs than she has cells to receive them; the perfect balance of the hive is destroyed and preparations for swarming is the result, and even though the colony were located on the ceiling of this large hall, they would swarm just as certainly, for the queen would be as much crowded as if she were in a small hive.

To questions asked, he said that the remedy for this was to have a hive so constructed that it will admit of pushing apart the frames, in the middle of the brood nest and inserting empty sheets of comb, if early in the season, but if the bees were in a condition to make wax rapidly, then empty frames were best, as the bees would fill them with comb as fast as needed by the queen. It is important that the inserted frames, whether empty or with comb, should be placed in the middle of the brood nest, and not to one side, as the queen will thereby be induced to occupy them solidly with eggs, and while she is doing that, the bees emerging from the cells in the comb forming the old nest will be giving more room, and

greater fecundity will be the result; when, if the frames are inserted to one side, she will be slow to occupy it, and before she can do so it will be filled with bee bread and honey.

When the queen has thus, at intervals, been given all the room she can occupy, and all compactly together, it is not probable that any further care will be necessary to prevent swarming during the honey season, provided, there *is enough room in the same chamber* to furnish room for the work of all the bees she can produce. Room given in boxes or top or side apartments will do no good, for the bees will not work in them freely, and whenever the brood chamber is filled to the ends, the bees will double back on the brood nest, and, as they find empty cells in it, will pack them with pollen and honey, and in a little while the brood nest will be reduced in size so that the queen will be again crowded, and the swarming impulse brought on from the disorganization so produced.

The hive should be of one story, and long enough to be certain that it will afford sufficient room for the work of the enormous colony of bees that will soon result from such management. By careful estimate he had found in a single colony, so managed 170,000 bees. In it there was no drone comb constructed during the season, and not a drone was reared in it; and, although drone comb was placed in the brood nest, the queen did not lay in it, but the bees filled it with honey.

An ordinary hive with a broad chamber of 2,000 cubic inches capacity will not accommodate exceeding 20,000 bees with working room. Whenever it much exceeds that number a swarm is cast, regardless of the amount of room there is in the top or side apartments. For while there might be room for storing honey, the nursing bees and wax producers would be crowded into the brood chamber, and however large the brood nest may have been at first, it will soon be filled with stores, particularly bee-bread, and swarming is bound to result. Even if the bees do work in the boxes and the wax-workers and honey gatherers are drawn out of the brood chamber, it leaves the hive in

scarcely a better fix, for the nursing bees are left to crowd it, and the pollen gatherers will not store the bee-bread away from the brood nest, but near to the larvæ to be fed; and as they will gather more than can be used in rearing the limited brood that can be hatched in so small a space, the comb soon becomes packed full of it. The bees will remove the honey from the cells in the brood chamber to make room for it, and the bee-keeper will be pleased that his boxes are being so rapidly filled. But the bees swarm. Not a bee is left in the boxes. They are taken off, full of honey perhaps. He looks into his brood chamber, and what does he find? Somewhere he finds a few patches of brood mixed in with cells full of bee-bread, and perhaps the greater part of the comb stuffed full of bee-bread,—there is bee-bread everywhere, enough to feed a hundred thousand larvæ, instead of the few thousand that they have left cradles for. The melipult will not extract it, and perhaps it is left in during winter, excluding the weak colony from the cells, and they have to live as best they can between the cold sheets of pollen, or more likely entirely die out before spring, from cold and starvation.

This picture is not overdrawn, for every experienced bee-keeper has seen hives in that condition, without being aware of the fact that it was the fault of the hives, and not of the bees.

A Member.—What is the shape and size of the hives you use.

Adair.—The hive should be long, and as wide as the length of the frames.—The frames to set in it crosswise. If the frames are large the hive need not be so long. The entrance should be at only one end. *This is important.* But there should be *two* holes, three-eighths of an inch by three inches, and about five inches apart. The brood nest should be in the middle of the hive, and *in no event* should the bees be allowed to fill the hive, so as to reach either end, for as soon as they do, they will double back the honey and crowd the brood nest.

Murray.—Will a queen that lays so abundantly live long? Will she not soon become exhausted?

Adair.—She will not live long. At the end of the second season she will likely be worthless. The ovaries of the queen have the germs of a certain number of eggs in them, and, when they are laid, no more can be produced, and she should be superseded whenever she begins to decline in fertility, for when she begins to fail, preparations will invariably be made for swarming.

Murray.—What do you gain then if it shortens the life of the queen?

Adair.—You gain a great deal. A hive so managed produces as much in one year as, under the swarming system, it might produce in four or five, and it is but little trouble to have young queens to supply the places of the old ones.

A Member.—In what shape do you get your surplus honey; in the comb or extracted.

Adair.—Some of both; but comb honey is the most profitable, and the bees will make more dollars' worth of it, in most seasons, but he would not be without the melipult, as it could hardly be dispensed with.

A Member.—How do you get your brood nest in the middle of the hive? Will the bees locate it there?

Adair.—The bees will locate it as near to the entrance as they can. In the hive he uses, the frames are closed at top, bottom and sides. He can hook together any number of them, closing the ends with glass in the summer, so that the hives can be easily examined. In winter, he closes them with straw or shuck mats. He hooks together, at first, enough to accomodate the bees with room for a few days, and until the brood nest is established. When the bees fill them too *near* either end, he adds more on the ends to give room for the workers and in the centre to enlarge the brood nest, and afterwards, as often as demanded, so that the queen never wants for room, nor the workers for space to build comb and store all the honey they can gather.

A Member.—How long is your hive?

Adair.—At first he thought that a hive three feet long would be sufficient, but found it too small. He then made them four feet long, holding thirty-two frames ten by thirteen inches inside.—

This is large enough, when the extractor is used or the comb honey is taken out often, but he had used them twice that size and had the bees to occupy all of the frames but five or six. Five feet long, with frames of that size, will do if attended to, but they must be larger if the honey is left in them.

A Member.—If your bees don't swarm how do you increase them?

Adair.—He made artificial swarms, and could increase his bees faster than from smaller hives, as the material was so abundant; for a nucleus, or even a good swarm, could be taken out without reducing the colony to the dimensions of the strongest colony you can have in a hive of ordinary size, and without materially checking its productiveness. He generally formed a nucleus of two or three sheets of brood, one or two of empty comb and one or two entirely empty. He hooked them together, set them in the cellar or a dark room for three or four days, then set them out, and as soon as they raised a queen built them up by adding brood as near maturity as he could get. The surplus queen cells were used in forwarding others. He had made as high as eight artificial swarms out of one hive, at one time, giving each a queen cell. With the addition of a little brood about the time the queen becomes fertile, they soon become strong colonies. Of course in such instances the parent colony was reduced to a small size, and was materially checked in productiveness, and it took them some time to recover.

For the American Bee Journal.

### That Patent Bee-Feeder.

The March number of the JOURNAL is just received, and of course is devoured at once. Friend Kretchmer, on page sixty-six, refers to my article on "Mr. Adam Grimm's Bee-Feeder," and says the feeder was patented May 6, '73, and speaks about the perforated screw cap. The cap is not perforated in Mr. Grimms' feeder, as friend K. will see if he looks the article over. I certainly should not have given a description of it for all to use, had I known it was patented. Mr. Grimm uses a good many of them in his apiaries, and told me I could make and use as many of them as I chose, for the feeder was one of his *own getting up, and was not patented, and would not be by him.* Any one

was free to use it. He certainly did not know any one had a similar feeder, or that it was covered by a patent. Will Mr. Grimm please notice this, and explain the matter to us? I see in the advertisements, Mr. K. has his feeder described as using "water, syrup, honey, or meal, and ventilates the hive at pleasure." A different feeder altogether, from ours, which is not calculated for feeding meal, and is no ventilation whatever, to the hive.

We have had a mild winter, for bees in this part of the country, so far. A part in houses, packed in straw, of about a foot on all sides, with cloth quilts on, summer entrance open, with wire cloth tacked over them. One lot were shut up just one hundred days, and came out strong, bright and clean, with few dead bees. While some that were wintered on their summer stands, lost a large share of their bees. Some writers speak about banking their hives in snow. That might do in Minnesota, but not in Illinois, for we only have a few inches, generally, and that is liable to disappear in a few days.

W. M. KELLOGG.

Oneida, Ills.

For the American Bee Journal.

### Plants For Bee Forage.

MR. EDITOR:—It would be an interesting item of information which *every* correspondent could communicate through your columns, if from all localities, they would give your readers an account, if only in a very few words, of the *plants*, with dates of beginning and ending of flowering season, which serve for bee forage in their neighborhoods. It would be interesting to note the quality of the honey made from different flowers. Many plants, whose flowers furnish either pollen or honey, are overlooked because either the flowers are inconspicuous, or do not constitute a very important element in bee-forage. Often are some of the earliest flowers, particularly of trees overlooked, because the spare honey is not obtained from them, although they are among the most essential to success. Furnishing early forage, they give the nourishment which is needed to get all things ready for the real honey-gathering we are more immediately interested in. Many a locality produces no spare honey, or very little, just because no good, early forage is at hand. In other places, as soon as bees can fly abroad in spring, they can obtain all they need to stimulate them to build up the colony to a good working condition. I repeat it, every contributor can give at least *one* item of interest, if he tells us, in order, what bees gather stores from in his region, from first to last.

Lockland, Ohio.

JOHN HUSSEY.

# American Bee Journal.

W. F. CLARKE, EDITOR.

## Bee-Stings.

One of the most formidable hindrances to the extension of bee-keeping, is the fear of being stung. If you suggest to any one well situated for the purpose, the advisability of starting an apiary, most likely the objection will at once be made, that the wicked little creatures are so mischievous with their stings, that there is no desire to have anything to do with them. The impression many people seem to have, is that the chief mission of the bee is not so much to store honey, as to sting all and sundry. Bee-keeping will always be confined to a select few, until popular mistakes are corrected, and more light is diffused in regard to this affair of stinging.

As a matter of fact, bee-stings are "like angels' visits, few and far between." It is only now and then that any one is punished thus, even in localities where large numbers of bees are kept. When it is considered that ordinary colonies contain twenty or thirty thousand bees, and that the population of, say forty hives, is about one million, it must be evident that stinging is a rare and exceptional thing, and so far from its being the chief business and constant aim of these insects, it is very seldom resorted to. Were it otherwise, and as too many unreflecting persons think; were bees as apt to sting as musquitoes are, it would be absolutely impossible to keep an apiary.

All creatures have means of defence furnished them adapted to the repulsion of those enemies by which they are likely to be assailed. Self-preservation is the first law of nature. Man is the chief enemy of the bee. Though this busy little worker is intended to do important service for the human race, it must have protection against the very beings whose interests it is meant to serve. If bees were as harmless as flies, no honey would be stored for mankind. Their operations would constantly be interfered with. Every school-boy and little child would so "meddle and muddle," that the order, discipline, industry

and usefulness of the hive would be destroyed. The sting is therefore a beneficent provision of nature, without which the bee could not accomplish its mission or fulfill its destiny. Some exceedingly scientific apiarians, indulge the dream of being able some day, to breed out the sting, or at any rate, the disposition to use it. Whether this dream will ever be realized, is a very doubtful matter, and whether its realization would, on the whole, tend to advance the interests of bee-keeping, is perhaps even more doubtful.

Some people affect to despise a bee-sting. We do not. A bee-sting is no joke under any circumstances, and under some circumstances, it is a very serious and painful affair, as we can testify from personal experience. In parts of the human body, where there are important blood-vessels and main lines of nerves, near the surface, causing the poison to act quickly and spread rapidly, a sting is sometimes dreadful, especially if inflicted at a time when the virus injected is more than usually powerful. For it is well known by experienced bee-keepers, that the poison is more virulent at some times than it is at others. We were once stung in the central point of the upper lip. The poison took immediate effect, and spread with astonishing rapidity, upward to the head and downward to the throat and stomach. The pain was excruciating. Sickness, burning fever and various alarming symptoms quickly resulted. It was three or four days before the effect of that one sting passed off. There have been cases in which a single bee-sting has caused death. It is therefore no sign of wisdom to ridicule the matter, but rather to estimate the thing as it really is, and endeavor to guard against it.

Intelligent acquaintance with the habits of the bee, and the use of proper precautionary and remedial measures, will either prevent stinging altogether, or will secure immunity from any serious and fatal consequences.

In the first place, it should be distinctly understood, that when bees are out foraging, they are too intent on their work to sting, unless they are interfered with, fought at, crushed, or made fast in some way. If human beings would mind their own business as diligently as the bees do, it would be well



for them. Quarrels and disagreements would seldom occur. It is perfect folly to start with affright at the presence of a bee. The music of their industrious hum, as they fly from flower to flower, loading themselves with honey, should no more awaken fear than the noise of a loom, a spinning-jenny, or machinery of any kind. If you meddle with the works, you may be hurt, and the same is true of the workers. But let them alone, and you are safe enough in both cases. Nor is there unusually any danger in quietly watching bees as they issue from and return to their hive. The stupid practice of hurrying about and striking at any bee that may happen to come near, is a sure way of exciting anger and provoking the infliction of a sting. Quiet movements, avoidance of all striking, standing stock-still, with the head slightly hung down, if the bees exhibit any signs of excitement and anger, will secure exemption from all harm. Even if pursued by enraged bees, gliding into a thicket of bushes, and remaining there a few seconds, will be found a sure means of escape.

The utmost liberties may be taken, and the most delicate operations performed among bees, with due care and precaution. As they are excessively nervous and irritable creatures, nothing should be done in a hurry. All sudden jars and rude movements must be avoided. They must be dealt with most gently and tenderly. Any kind of smoke is an effectual means of subduing and quieting them. It will prevent their becoming excited, and reduce them to composure even after excitement has commenced from any cause. Bee-keepers who smoke tobacco, are accustomed to employ the fumes of their favorite weed for this purpose, and it accomplishes it very effectually. But it produces a stupefying and irritating effect afterwards. Smoke from chips, saw dust, cotton rags, or even paper, will answer as well. The most convenient source of smoke is a bit of dry-rotted, hard wood, or "punk" as it is sometimes called. It burns without flame, will keep alight until the whole is consumed, may be laid close at hand, and readily used whenever wanted. When there is a necessity for opening a hive, it is well to blow two or three puffs of smoke in at the entrance; within

five minutes or so, it will have taken effect. Then with slow and cautious movements, the hive may be opened. Usually a quiet, contented hum, will show that the inmates are peaceable. But if there is excitement and more or less rush hurridly out, a few additional puffs of smoke will reduce them to submission, so that it will be safe to proceed. Care should be taken not to crush or kill any of the bees. The slaughter of a single one will sometimes enrage a colony, previously quite docile. But should such an accident occur, a fresh dose of smoke will restore order.

Smoke is thought to have two effects. First, it creates a slight panic among the bees, leading them to fill themselves with honey, and in this condition they are no more disposed to sting than an Englishman is to quarrel just after eating a good dinner. There is a sense of fulness, contentment and satisfaction. Secondly, it neutralizes the poison-odor. Anger causes bees to elevate their tails, and a tiny drop of poison will ooze out, the odor of which rouses the war spirit. The same effect is produced when a bee is killed. Smoke counteracts this odor, and so induces quiet. There is a third effect of smoke which may be brought about, though it is not good policy to have recourse to it, because it leaves them cross and irritable. A strong dose of tobacco, or puff-ball smoke, will absolutely stupefy them, so that they will drop from the combs, and lie harmless and helpless at the bottom of the hive, until restored to their senses by fresh air.

Bees employ a substance called propolis to fasten frames and fill up crevices in the hive. In hot weather this is quite soft and waxy, but in cool weather, it becomes hard and brittle like glue. In opening a hive and taking out frames, the propolis is of course disturbed, and when it is hard, this cannot be done without some jarring. To avoid this as much as possible, it is advisable to use a form of hive and style of frame that can only be glued very little; and also to open the hive and operate upon it in the middle of the day, and when the weather is warm.

We advise bee-keepers, and especially beginners, to use a veil and gloves. They give confidence, induce calmness, and guard

against accident. A veil may be readily made of net or thin gauze, and the best gloves we know of, are the cheap harvesting ones made of sheep-skin to protect the hands from thistles.

Various remedies are used to antidote bee-stings. Any alkali application is good. Common washing soda and blue-bags, are generally at hand, and may therefore be recommended. A drop of honey, a little garden soil, spirits of hartshorn, alcohol, and tincture of iodine, are among the external applications advocated. In severe cases, a dose of whiskey or brandy is said to be good. A wet sheet pack is also recommended. But we have discarded every other application since becoming acquainted with a German remedy lately introduced. A drop or two will remove all trace and effect of a sting in a very few minutes. It costs but a trifle per bottle, and a single bottle will last a bee-keeper for a lifetime.

## The A B C of Bee Keeping.

CONDUCTED BY PROF. A. J. COOK.

### ARTICLE I.

Of course I have wondered why the wise managers of the dear old BEE JOURNAL, chose me from all the fraternity to conduct this department. I suppose the answer would be suggested by the oft repeated assertion of school directors: "Any one can teach our school, they are all beginners." But, slyly, they are fooled, for our best educators think that those just commencing need the wisest instructors. So all will see that there is one joke connected with this department, however dry it may be in the main.

#### BEGINNERS.

Who are they, who should be eager to lend me their ears each month, whom I am to lead understandingly into the ways of pleasantness, and the paths of rich pecuniary reward? All, I answer, whether in country or town, who have space for one or more bee-hives, who are not now keeping bees, and who desire either more money or more pleasure, and who can give a few minutes weekly to pleasure and to profit. Especially farmers, who need something to supplement, their regular business, and add to the length of their purse. I am a teacher, yet last year, by spending not

more than an hour a week, from May to October, and even that only when I needed the rest and recreation, my three colonies of bees netted me over \$100.00, and all may do this, if they will but inform themselves, and work intelligently. That able bee-keeper, Mr. E. Rood, so long the genial President of our State Society, used to say no one should keep bees, who could not make a neat hive. I have heard others say no one should become a bee-keeper who did not enjoy being among bees. But I would say: Let all keep bees, who have a taste for the wonderful in nature, which they wish to gratify, or a desire to "inflate their individual currency," which may thus be done with perfect safety.

But, say the eager ones, how are we to commence? Just what I am about to explain to those who will attend. And more, I will warrant success to all who will heed and obey. First, as a preface to your beginning, subscribe for the AMERICAN BEE JOURNAL, and purchase either Langstroth on the Honey Bee, or Quinby's Mysteries of Bee-keeping. The first to be carefully read, the second to be studied and kept ever close at hand for reference.

#### HOW TO GET THE BEES.

A beginner should be satisfied to begin with about two colonies. If you can find some one who has bees in movable comb hives, that suit you, for sale, by all means take them. If the hives do not suit, it will be cheaper to get those in box-hives, as in either case, you would wish to transfer them into a suitable hive. But you ask, What is a suitable hive? It must have movable frames, and then the more simple the better. Discard all doors, drawers, traps etc., which only involve expense, and are worse than useless. I prefer a square frame, say a foot each way, as permitting the most compact arrangement for wintering, and as less apt to be severed from its full comb, when handled or placed in the extractor. Those who know nothing of hives could not do better than send to A. I. Root (Novice) for a two story Gallup hive for a sample, and be sure to get the tin corners for the frames. His bent tins on which the frames are to rest, you can, as you make a hive, replace by a narrow strip of heavy tin, which you can easily tack on. This is cheaper, and I think just as good. Also replace the old honey board by Novice's quilt or a piece of old carpet or heavy cloth which will do as well. I am thus particular about hives, as very much depends on a correct start in this direction.

#### HOW TO SELECT THE COLONIES.

Go to the Apiary on a warm day, note those hives from which the bees rush out as though they were packed, and from such select your two colonies; for the beginner especially, should have none but strong vigorous colonies.

Your colonies home, (it will be well to place them where they are to remain for the summer, on separate stands four or five inches from the ground, a board standing off a foot or more from the entrance to the ground, facing the east, and set under a tree or bush, that they may be shaded from the sun during the heat of the day,) you had better feed them every day or two, a little syrup made either from brown or maple sugar. This will stimulate to a rapid production of brood, the great desideratum at this season. A cheap, easy way to feed, is to take an old oyster can, melt both ends out, then tie a piece of factory over one end for a bottom. If you have a movable comb hive, cut a flap, by cutting on three sides, out of your quilt or carpet, just the size of the can, turn this back, and set the can on and turn in the syrup. The bees will sip up the fluid as it oozes through the factory. This is covered by the upper story of the hive, or the same that covers the boxes in summer. The can may be as easily placed on the holes in the top of a box hive and protected by the same box that covers the honey boxes in the season of gathering. This feeding had better be continued sparingly till the fruit trees are in full bloom, and even afterward, if there are several successive days too cold for the bees to fly, or if there are no flowers to gather from.

But you ask, How am I to get the bees into my new hive? As soon as the bees are busy gathering honey, select a bright warm day, and when the sun is well up, and the bees all at work, don your bee hat and gloves, for every beginner should protect himself, and with a burning piece of rotten wood or roll of cotton cloth, blow some smoke into the entrance of the hive, keep doing this for five minutes, then invert the hive and place a box, previously prepared, at least of the capacity of a half bushel, and which just fits the hive, on top of it, wrap a cloth about the lines of junction, so that no bee can possibly get out, then rap on the lower hive with some small sticks for twenty or thirty minutes, paying no heed to the many bees constantly returning from the field; at the end of this time, take off the upper box very carefully set it on the old stand, and so raise it up that the "uots" can go in. Take the old hive, with the few still remaining bees, and carry it to some close room. Do off hat and gloves, for these bees will not sting unless pinched, and with hammer and axe pry the old hive carefully apart, striving not to break the comb. With a long knife cut out the cards of comb, entire if possible. Take each as it is cut out, place it on several thicknesses of thick cloth, which rest on a board say two feet square, which in turn rests on a barrel. Place a frame on the comb, and cut the comb so that it will just fit in the frame. Place the comb in the frame and fasten in by winding with two small wires or

strings. Do so till all the comb is neatly and carefully fitted into the frames. Be very careful not to injure the brood. Carry the hive, with its frames all in place, and quilt on top, back to the stand, set it on a board, with the front raised, say a half of an inch, place a wide board in front, and taking the box (you now have the veil or hat and gloves on,) shake all the bees on to the board close up to the hive. They will soon take possession, and feel entirely at home, and show their appreciation of their new home, by going speedily to work. In three or four days they will have fastened in the combs, and you can, protected and armed with smoke, proceed to take off the strings or wires. In all your handling of your bees be careful not to make a quick motion, nor jar the bees. If afraid, remember you are well protected and forget that you have any nerves. Do all this and keep studying your book, and in the next I will instruct you further.

## Questions and Answers.

CONDUCTED BY CH. DADANT.

### INTRODUCING QUEENS.

"What is the best mode, for a beginner, to introduce an Italian queen?"

J. E. B., Nauvoo, Ills.

As soon as the Italian queen is received, hunt for the black queen and take her out. Then put the Italian queen in a cage made with a piece of wire-cloth, about eight meshes to the inch, four inches square, and rolled in the shape of a tube. Both ends are stopped with a bit of corn cob. The cage is put horizontally between two brood combs, one inch or so under the top bar, and as much as possible against sealed honey, which should be scratched a little, so that the queen can feed herself, if the bees don't take this care.

The next day, remove the cage, and replace one of the hoppers with a bit of sealed honey. Put the cage back in the same place, and shut the hive, acting very quickly. The bees will suck the running honey, and cut the damaged cells. Some of them will cut at the cage and will caress the queen, who will go out very quickly and be well received.

The theory of introduction is fixed upon this fact, that if the bees are unaware of the call of their queen, they will construct no queen cells, and will more easily accept a strange queen, than if they had commenced their preparations to take a queen; and in the second place, if the colony is quiet, without robbers, and the queen herself quiet, too, she will not be considered as a strange bee.

As it is necessary to avoid robbing, when you open the hive the second day, if you have been annoyed by robbers, while hunting for the black queen, it is safer to wait until evening, when the bees are all at home. Yet the operation is more easily performed at mid-day, and the robbers are little to be feared, if you act quickly, although quietly.

"I see in the AMERICAN BEE JOURNAL, that Mr. Furman, and several other bee-keepers, at the meeting of the Iowa Central Association, have said that pure honey would not become candied. My expense is altogether different; I have quite pure honey entirely granulated. Can you give me your experience on the subject?"

J. M. A., St. Louis, Mo.

The honey from rape, granulates very quickly. I have seen, in Italy, such honey, gathered in April, granulated in the combs in August. The honey from clover, melilot, lucern, sainfoin, linden and buckwheat, granulates also, although not so fast as the rape honey; while the honey yielded by several trees does not granulate. I have seen honey as good and as liquid, after two years, as if it was newly gathered. It was acacia or locust honey.

Therefore, the granulating of honey does not indicate its want of purity; on the contrary, in France, where the best quality of honey comes from sainfoin, the thorough and even granulating is considered the best test of purity.

#### For the American Bee Journal. Simple Bee Feeder.

A very simple, and at the same time effectual, feeder may be extemporized by filling a glass vessel (a tumbler or a fruit jar is best) with honey or syrup, placing a saucer upon it and quickly inverting them. This allows the bees to take the food from the entire circumference of the vessel without their becoming daubed with the liquid, which may be made thick or thin as desired. Any number required may be quickly and inexpensively obtained in the dining room of any family. By using glass vessels the bee-keeper may tell at a glance how fast the food is being taken, and which need refilling. Of course they must be placed on the top of the hives or frames and securely covered to prevent robbing. Many feeders are based upon this same principle of atmospheric pressure, but none are more effectual, simple or inexpensive.

DR. D. R. PORTER.

Manhasset, Long Island.

Swammerdam found nearly four thousand cells built, in six days, by a new swarm consisting of less than six thousand bees.

#### Voices from Among the Hives.

CH. DADANT, Hamilton, Ills., writes:—"Bees are wintering finely."

JOSEPH A. HART, Craig, Ind., writes:—"Bees are wintering better here, than for many years past."

A. F. HART, Appleton, Wis., writes:—"Bees seem to be wintering here very well, although we have had a long winter."

H. O. KRUSCHKE, Berlin, Wis., writes:—"The JOURNAL improves with every issue. It has got into the right hands at last."

D. S. McCALLUM, Hornellsville, N. Y., writes:—"I have about eighty swarms of bees, and they have wintered finely."

R. R. MURPHY, Fulton, Ills., writes:—"Bees have wintered well in this part of the country, and the prospect is more encouraging for bee-keepers, than for several years past. The white clover has not winter-killed the past winter, as it did the two previous ones."

DR. JARED P. KIRTLAND, East Rockport, writes:—"As I am over eighty years of age, and have ceased to cultivate bees, I wish to be considered on the list of retired apiculturists, like my friend Mr. Langstroth. I began the pursuit in the summer of 1810, and with the exception of a very few years, have continued it till very recently."

J. A. MAXFIELD, Saxon, Ills., writes:—"Bees have wintered well, with me. I lost twenty-one swarms last winter and spring, leaving me three swarms. I increased them to six, and have wintered in the cellar for four winters. The first winter and this they wintered well. My cellar is under the kitchen, and was built on purpose for wintering bees. There are not fifteen swarms of bees within three miles of me. My bees are all black."

D. H. KELLER, Duncan Falls, Ills., writes:—"Last winter, I lost a few hives by placing them too close to the damp stone wall in our cellar, where they became wet and diseased. This winter, I put other hives in the same place, placed coffee sacks over them, leaving the tops off, and they did not become even damp. So it would be well to note, that after all, ventilation is what saved them this winter, and no ventilation killed them last winter. My cellar is a very dry one. I tried an experiment as follows: I set a strong hive in the middle of the cellar, covered it with a blanket, closed the hive below, and then put the lid tightly on the blanket. In about a week I examined, and found that the lid was covered with large drops of water, and the blanket was becoming wet. I then removed the lid, leaving nothing but the blanket on top. All went right from that time. I set them out about the middle of February, and they are now (March 3d) all alive. I have forty-nine stands."

P. D. JONES, Mt. Morris, N. Y., writes:—"I wish to make an inquiry in regard to extracting honey in the spring. Can it be done? I have fourteen swarms that are in good condition at the present time. I have examined five or six of them, and find they are breeding finely, but I think they have too much honey. I have estimated it to be from twenty-five to fifty pounds to the hive. I have kept bees for the last twenty years, and have never had them winter on so small a quantity of honey as they have had this winter. It seems to me, if there was less honey and more empty combs, that they



would build up faster than in their present condition. The honey is of a good quality, and very thick. The question with me, is, Whether the honey can be taken from new combs without destroying them. The combs are very white, and easily broken. I have never used the Extractor: in fact, I have never seen but one, and that a home-made one. I desire information from those that are not interested in the sale of machines. I am wintering my bees on their summer stands, by driving stakes in the ground, one foot from the hives, and packing with flax-straw to the top of the hive, on all sides, except the front, which I leave open. I give no upward ventilation. I use the American and Langstroth hives. Last winter I lost fourteen out of twenty swarms, with a disease entirely new to me, but have seen nothing of it as yet, this winter, and hope that I never shall again."

THOS. HUTCHINS, Wyoming, Pa., writes:—"I am what you would call a careless bee-keeper. I have about ninety hives of bees. Some in the American and some in the Queen hives; but most of them are in the Quinby hive. I am living in Wyoming Valley, Luzerne Co., Pa. We have not had a good bee season here for the last five years. There are no basswood or linden trees in this locality. Buckwheat and white clover are the principal honey producers. Honey varies here in prices; the nicest box honey brings from thirty-five to forty cents. The most I ever got from one hive, was forty pounds, fourteen-pound boxes. That was from the Quinby hive. It seems almost incredible to me when I here of such large yields of surplus honey, in other localities, to keep bees. The winter here has been very favorable for bees, not being very severe; but we are now having very cold weather, to what it has been the past few months. Last winter I lost forty stocks of bees, the weather being very severe. My opinion is, that when bees are strong enough, and left on the summer stands during the winter they do the best; but all late and weak swarms I put in my cellar, it being very dry, turning my hives upside down. I feed them about every two or three weeks. I feed them syrup made of two-thirds "A" sugar, and one-third water, boiled and strained. I feed them by pouring it in among the bees. I see by your JOURNAL, that some feed their bees in November. Is it because they have no honey? If they have honey, do they want feeding? I think it would be small business to rob them of their honey, and have to feed them sugar syrup or any other food."

A. R. RICH, Metamora, Ill., writes:—"The winter thus far (January 17th) has been very moderate, and my bees are weathering it very well out of doors. I have always wintered in the cellar heretofore—or rather tried to do so—but I think that in reasonably mild weather the bees are better off outside. I have most of mine in straw hives, and think them superior on many accounts for both winter and summer. Fully nine-tenths of all the bees in this section of country froze to death, or died from some other cause, last winter. Some persons made special preparations for winter, others made none, with perhaps no perceptible difference in the result. The most successful man I have heard of in this region, however, had his bees in rickety box hives, on the west side of his smokehouse, which stands right in the teeth of the northwest winds. The hives stood on a bench nearly three feet from the ground, and, in some cases, the front edge of the hive projected five inches beyond the edge of the bench! He lost not more than one in five or six. An-

other neighbor, who had graded Italians, got through the winter with nine out of twelve, but before swarming time he lost all but one. In all the other cases, except my own, the bees were blacks. I predict—that is, I simply guess—that there will be this present winter far less loss in this region of country than for two years past. My own bees, and I presume it was the case generally, kept breeding for nearly three months later in the summer and fall than heretofore, and went into winter quarters with a goodly number of young, strong and healthy bees, and I hope there will be less freezing this winter and less loss next spring. I increased my four stocks to twelve, got considerable extracted honey, mainly from heartsease and buckwheat, and it is that kind of honey they are wintering on now—the same that gave them the dysentery two years ago."

SEYMOUR RUGGLES, Saratoga, N. Y., writes:—"The bee business in this section, is in a very backward condition, with few exceptions. Many use box hives, without a chance to put on boxes, unless put on the outside of the hives. They leave their bees on the summer stands through the winter. I have noticed this winter, some bee-keepers had hives without bottoms, set upon four one-inch blocks, protected from west winds only. I don't see how bees can stand such an airing. I could not winter bees that way, unless the hives were large, filled with comb, and colonies very populous in the fall. The fact is, most bee-keepers around here know nothing of modern bee-keeping. I informed one man not long since, that he ought to have Quinby's or Langstroth's book, and the AMERICAN BEE JOURNAL. 'Oh,' he says, 'they want money for their books, I can get along without them.' The same afterwards said the drones laid all the eggs. Last fall I set box hives in the cellar; January 2nd set the bees out at 12 o'clock, it was warm and still, 58 in shade, at 2 p. m. it was cloudy, and a furious wind arose. Many bees were blown away, as they were flying quite briskly. The next day I set the box hives back into the cellar. They have not shown any signs of dysentery, whether in the cellar or out, up to this date (March 10). Mr. Perry, the only person here, besides myself, that uses movable comb hives, had 1,400 lbs. honey in glass boxes last year. He has 80 colonies, winters in cellars, but never saw Quinby's or Langstroth's book or the JOURNAL. It has been a favorable winter for bees so far."

E. S. FOWLER, Bartlett, O., writes:—"There are no bees kept in this part of the country (save what few I keep) in movable frame hives, except as the farmers keep them the old fashioned way. We have never had bee cholera or dysentery as an epidemic except the winter of '68 and '69. It was not an unusually cold winter with us, while the winter of '72 and '73 was the coldest for ten years or more without any dysentery; hence the cold weather theory don't suit my experience. I have always been able to produce dysentery by leaving a colony queenless for two months, before the time they quit breeding in the fall.—Old bees not wintering as well for me as young ones, at least I am not able to give another reason for the difference. I have no reason for doubting nor any experience to confirm the opinion that the honey gathered some seasons is not healthy for the bees. Perhaps different causes operate in promoting and aggravating the disease in different parts of the country—hence the different opinions. Let us not be in too great a hurry to see who will have the honor of guessing right first."

# American Bee Journal.

THOMAS G. NEWMAN, MANAGER.

## RATES OF ADVERTISING.

### SOLID NONPAREIL MEASURE.

First insertion, per line.....	\$0.20
Each subsequent insertion, per line.....	.15
One square, 10 lines or less, first insertion.....	2.00
Editorial Notices, solid Nonpareil, per line.....	.30

Next page to Business Department and second and last page of cover, double rates.

A deduction of 20 per cent. made on advertisements inserted three months, 30 per cent. for six months, and 50 per cent. for one year.

Twelve lines of solid Nonpareil occupy one inch. One column contains 96 lines of solid Nonpareil.

Bills of regular Advertisers payable quarterly, if inserted three months or more. If inserted for less than three months, payable monthly. Transient advertisements, cash in advance. We adhere strictly to our printed rates.

Address all communications and remittances to the Manager.


Not one letter in ten thousand is lost by mail, if rightly directed.

Single Copies of the AMERICAN BEE JOURNAL are worth 20 cents each.

Additional names to a club already formed may be sent at any time at the same club rate.

NEWLY PATENTED HIVE.—John W. Walker, of Nashville, Tenn., has obtained a patent on his new hive.

Upon the wrapper of every copy of the JOURNAL will be found the date at which subscriptions expire.


 We will club the AMERICAN BEE JOURNAL with A. M. Purdy's *Fruit Recorder and Cottage Gardner* for \$2.25.

Any numbers that fail to reach subscribers by fault of mail, we are at all times ready to send, on application, free of charge.

On the Pacific Coast, we are informed by Stearns & Smith, they have had twenty inches of rain, and the season is very late and cold.

Subscribers wishing to change their post-office address, should mention their *old* address, as well as the one to which they wish it changed.

Langstroth's patent on movable-frame hives expired last year. There is now no patent covering movable frames—all such are public property.

 We want several copies of No. 1, Vol. 2, of the AMERICAN BEE JOURNAL, and will pay 50 cents each for them. Who will send us some?

JOURNALS are forwarded until an explicit order is received by the publishers for the discontinuance, and until payment of all arrearages is made as required by law.

## Newspaper Decisions.

1. Any person who takes a paper regularly from the post-office—whether directed to his name or another's, or whether he has subscribed or not—is responsible for the payment.

2. If any person orders his paper discontinued, he must pay all arrearages, or the publisher may continue to send it, until payment is made, and collect the whole amount—whether the paper is taken from the office or not.

3. The courts have decided that refusing to take newspapers and periodicals from the post-office, or removing and leaving them uncalled for, is *prima facie* evidence of intentional fraud.

Persons writing to this office should either write their name, Post-office, County and State plainly, or else cut off the label from the wrapper of their paper and enclose it.

The postage on this paper is only twelve cents a year, if paid quarterly or yearly in advance at the post-office where received. We prepay postage to Canada, and require twelve cents extra.

Hereafter we shall mail a Printed Receipt to everyone sending money to this office.—Those who do not get such Receipt by return mail, should notify us, that we may ascertain the cause of delay.

When a subscriber sends money in payment for the AMERICAN BEE JOURNAL, he should state to what time he thinks it pays, so that we can compare it with our books, and thus prevent mistakes.

Publishers needing cuts or engravings, will do well to address the Manager of the American Publishing Company, who have a large supply for sale that have appeared in "The Illustrated Journal."

Should any subscriber wish to discontinue taking our JOURNAL, he should address a letter to the Manager, and enclose the amount due, and it will then cease to visit him. Any other course is dishonorable.

Every subscriber is requested to look at the date after his name on the wrapper label of this *Number* of the AMERICAN BEE JOURNAL, and if it is not correct send a postal card to this office, and tell us and we will make it right at *once*.

BINDING.—We have been requested to get sets bound for some of our subscribers, and have made arrangements to get the nine Vols. bound in three vols. for \$4.00, or the same in four vols. for \$5.00. Those who wish to avail themselves of these liberal terms must send their numbers by express to the Manager.

## Honey Markets.

CHICAGO.—Choice white comb honey, 28 @30c; fair to good, 24@28c. Extracted, choice white, 14@16c; fair to good, 10@12c; strained, 8@10c.

CINCINNATI.—Quotations from Chas. F. Muth, 976 Central Ave.

Comb honey, 15@35c, according to the condition of the honey and the size of the box or frame. Extracted choice white clover honey, 16c.  $\frac{1}{2}$  lb. Choice extracted honey, 16@18c.  $\frac{1}{2}$  lb.

ST. LOUIS.—Quotations from W. G. Smith, 419 North Main st.

Choice white comb, 25@29c; fair to good, 16@22c. Extracted choice white clover, 16@18c. Choice basswood honey, 14@16c; fair to good, extracted, 8@12c; strained, 6@10c.

NEW YORK.—Quotations from E. A. Walker, 135 Oakland st., Greenpoint L. I.

The sale of honey is dull here, and a large quantity is now upon the market. The prices rule as follows:

White honey in small glass boxes, 25c; dark 15@20c. Strained honey, 8@12c. Cuban honey, \$1.00  $\frac{1}{2}$  gal. St. Domingo, and Mexican, 90@95  $\frac{1}{2}$  gal.

SAN FRANCISCO.—Quotations from Stearns and Smith, 423 Front St.

Choice mountain honey, in comb, 22 $\frac{1}{2}$ @25c; common, 17@20c; strained, 10@12c, in 5 gallon cans. Valley honey, in comb, 12@17c; strained, 8@10c.

## To Those Interested in Bee Culture.

At the sixth annual meeting of the Michigan Bee-Keepers' Association, it was decided to hold a special meeting at Kalamazoo, to commence Wednesday, May 6, 1874. It is especially desired that all members be present, and, in behalf of the Association, we urge every Bee-keeper in Michigan to attend. A cordial invitation is also extended to all persons interested in the science of Bee-culture whether residing in this or other States. Surely much good may be derived from a comparison of experiences next spring, and from the able papers that will then be presented. Timely notice will be given of all further arrangements. Address communications or inquiries concerning the subject to

FRANK BENTON, Sec'y.

Shelby, Oceana Co., Mich.

Many Pamphlets on bee culture, etc., come to us printed in a disgraceful manner. For the credit of the bees, whose work is always a model of neatness, we protest against this manner of treating the business. If any one wants a creditable pamphlet issued we will do it for him in a manner that will not only reflect credit on bee culture, but also on the printing business. If any one persists after this in issuing meanly printed documents, they will oblige us by not sending them to the AMERICAN BEE JOURNAL.

## New Advertisements.

As usual the old and reliable AMERICAN BEE JOURNAL presents its many readers with a new batch of advertising announcements.

Books for Bee Keepers may be obtained at this office.

W. J. Davis notes the excellencies of his Italian Queens.

R. R. Murphy's Honey extractor is announced as ready for the market.

M. M. Reynal & Co's Cabbage Seed will be sent for 25 cents per package.

Gregory's Marblehead Mammoth Cabbage looms up beautifully with a cut.

A. Gray & Co. hold Extractors, Queens and Apiarian Supplies for sale at bottom prices.

GOOD TIDINGS, a new religious paper, is out, and its Prospectus appears in our columns.

The History of the Grange Movement is announced and agents are wanted for canvassing for it.

Kruschke Bro's new pamphlet on Rape Culture is out, and will be sent for 10 cents. They also send Granger Hives, for a song.

Langstroth Hives, well made of good seasoned lumber, may be obtained of a manufacturer in this city through the manager of this paper.

THE SCIENTIFIC FARMER, the finest and cheapest paper of its class in the world, will be sent for three months for 25 cents, or with its Chromo, "Just One," for 50 cents.

The LADY'S OWN MAGAZINE can accommodate a few more subscribers with its two Chromos. We acknowledge the receipt of these Chromos, and must say they are superb. See advertisement.

Our subscribers in Great Britain, France, Germany, Italy, Switzerland, and other parts of Europe, can now procure Postal Money Orders on the Chicago Postoffice, and this method of sending money to us is the *safest* and by far the most economical one.

N. C. MITCHELL authorizes us to state that he will square up his indebtedness as soon as possible, and invites all who consider him indebted to them, to write to him at once, at Columbia, Tenn. We trust that his promises will be fully verified.

Every subscriber to the AMERICAN BEE JOURNAL is requested to send stamp for a sample copy of THE SCIENTIFIC FARMER, an illustrated monthly for the Farm and Fireside. See advertisement on the last page of this issue. It will be sent from now to the end of the year 1874, with the AMERICAN BEE JOURNAL one year, for \$2.50, or with the choice of Chromos—the Fruit Piece, or the new and lovely household gem, "Just One," for \$2.75; or with both Chromos, \$3.00. This is a rare chance, and should bring in two thousand names before the next issue of the AMERICAN BEE JOURNAL.

The LADY'S OWN MAGAZINE is on our table. It is a Literary, Household and Fashion Monthly, Published at \$2.00 per annum in New York and Chicago, by M. E. Bland & Co. It gives two beautiful chromos with the magazine for \$2.50.

